SHIP PRODUCTION COMMITTEE
FACILITIES AND ENVIRONMENTAL EFFECTS
SURFACE PREPARATION AND COATINGS
DESIGN/PRODUCTION INTEGRATION
HUMAN RESOURCE INNOVATION
MARINE INDUSTRY STANDARDS
WELDING
INDUSTRIAL ENGINEERING
EDUCATION AND TRAINING

June 1976
NSRP 0002

THE NATIONAL SHIPBUILDING RESEARCH PROGRAM

Proceedings of the REAPS Technical Symposium

Paper No. 1: Practical Shipbuilding Research and Development

U.S. DEPARTMENT OF THE NAVY
CARDEROCK DIVISION,
NAVAL SURFACE WARFARE CENTER

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
JUN 1977	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The National Shipbuilding Research Program: Proceedings of the REAPS Technical Symposium Paper No 1: Practical Shipbuilding Research and Development	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Surface Warfare Center CD Code 2230 - Design Integration Tools Building 192, Room 128 9500 MacArthur Blvd Bethesda, MD 20817-5700**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**SAR**	**9**	

DISCLAIMER

These reports were prepared as an account of government-sponsored work. Neither the United States, nor the United States Navy, nor any person acting on behalf of the United States Navy (A) makes any warranty or representation, expressed or implied, with respect to the accuracy, completeness or usefulness of the information contained in this report/ manual, or that the use of any information, apparatus, method, or process disclosed in this report may not infringe privately owned rights; or (B) assumes any liabilities with respect to the use of or for damages resulting from the use of any information, apparatus, method, or process disclosed in the report. As used in the above, “Persons acting on behalf of the United States Navy” includes any employee, contractor, or subcontractor to the contractor of the United States Navy to the extent that such employee, contractor, or subcontractor to the contractor prepares, handles, or distributes, or provides access to any information pursuant to his employment or contract or subcontract to the contractor with the United States Navy. ANY POSSIBLE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR PURPOSE ARE SPECIFICALLY DISCLAIMED.

IITRI

Proceedings of the REAPS Technical Symposium June 15-16, 1976 Atlanta, Georgia

Research and
Engineering for
Automation and
Productivity in
Shipbuilding

IIT RESEARCH INSTITUTE
10 WEST 35 STREET
CHICAGO, ILLINOIS 60616

PRACTICAL SHIPBUILDING RESEARCH AND DEVELOPMENT

Ellsworth L. Peterson

Peterson Builders, Inc.

Sturgeon Bay, Wisconsin

Mr. Peterson is Director, President and Treasurer of Peterson Builders, Inc. He graduated from the U.S. Merchant Marine Academy and is an active member of numerous marine and civic societies, most notably the Ship Production Committee (SNAME).

We all know research and development goes on in laboratories--what you may not be aware of is that there has been a practical shipbuilding research and development program since 1971. Many worthwhile productivity improvements have occurred in the past five years. Mr. Jack Garvey of MarAd gave a paper to SNAME, in April 1976, which is an excellent summary of the status of these projects. I personally have been on the Ship Production Committee for only a couple of years--and enjoy the association.

The Ship Production Committee is made up of representatives from approximately twenty-four shipbuilders plus the American Bureau of Shipping, U.S. Coast Guard, U.S. Navy Research and Development and, of course, the Maritime Administration whose budget is the backbone of this vital project.

In order to set the pace this morning, we shall show a film about the program. This will help explain and give background for further comments and discussion.

Hopefully, you have the picture. Here are shipbuilders and a user government agency helping themselves improve their capabilities, procedures and productivity to keep competitive in world markets. We are making progress.

We have completed many projects, are in the middle of quite a few, just starting some, and others are only in the planning stage. Who decides what are worthy projects? The industry. How? By having the Ship Production Committee's panels make recommendations as to what projects would be helpful. We poll the industries to see who would use the results of a project. The more yards that would use, the higher the priority; the higher the potential saving, the higher the priority. We then list the projects in priority sequence,. see how far the budget reaches for the year, and submit those-

plus a few extra-to the Maritime Administration for approval. When approved and a shipyard agrees to act as sponsor, a suggested contract is worked out between the sponsor shipyard and the Maritime Administration. I personally am not involved in that cycle.

However, participation is the name of the game, without involvement in a program you are not apt to get much out of it.

Other highlights of the Ship Production Committee:

1. The panel meetings are held at various shipyards and include show-and-tell sessions, a very important way to share knowledge which will improve our industry.

2. The Ship Production Committee has recently appointed a Vice Chairman of the Board who will be calling on shipyards not only to have top management aware of, but also to show the user groups in the shipyard, some of the programs that can save them costs and improve quality.

3. When processes are developed, they are proven to the acceptance of the shipyards and the American Bureau of Shipping or the U.S. Coast Guard, so that they can, in fact, be used.

4. Information is available through several sources. After a project is completed, published information is available from the National Technical Information Service, (U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.) Before that time, some information is available' from the program manager of the project.

5. We try to work closely with the Navy's Research and Development Group, the Coast Guard's Manufacturing Technology Group and the American Bureau of Shipping so that they are also involved. Early discussions help with early approval.

6. Ship Production Committee panels are:

SP-1	Facilities (Material Handling)
SP-2	Production Techniques (Outfitting Aids)
SP-3	Environmental Effects (Shipyard Only)
SP-5	Organization and Manpower (Manpower Motivation)
SP-6	Standards & Regulations (Ship Producibility)
SP-7	Welding
0-34-1-	Computer Aids to Shipbuilding
9-23-1-	Surface Preparation and Coatings

7. Shipyard primary sponsors are leaders; they are Avondale, Bath Iron Works, Bethlehem Steel, Newport News and Todd Shipyards.

8. The most valuable result of this program is that the shipyards are talking to each other at the working level for the betterment of our industry. For example, at our last meeting at Avondale, Mr. Bob Cowart, Vice President of capital recovery for Avondale Shipyards, made a brief presentation to the committee on a recently initiated program. Basically, it involves a plan to sell new material, which a yard finds it cannot use, to other yards, often at a substantial discount from the market price, but still leaving some profit and helping cash flow for the selling yard. Avondale

proposes that all major shipyards develop a computer inventory of excess material which could be accessed by another yard via a CRT display. This would allow a free interchange of needed material, with substantial savings to all involved. All committee members were urged to review Mr. Cowart's proposal, and, if possible, bring it to the attention of the cognizant individual in their particular yard. Comments should be forwarded directly to Mr. Coward at Avondale. This could be the start of standard terms and nomenclature for the material used in shipbuilding and standards are needed.

I believe we have covered the base of the program and can open up for some questions at this time.